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Value relevance of blog visibility

Nan Hu [a,*], Ling Liu [a], Arindam Tripathy [b], Lee J. Yao [c,d]

[a] Department of Accounting and Finance, University of Wisconsin Eau Claire, Eau Claire, WI 54702, United States
[b] Milgard School of Business, University of Washington Tacoma, Tacoma, WA 98402, United States
[c] J.A. Butt College of Business, Loyola University New Orleans, New Orleans, LA 70118, United States
[d] School of Business Administration, Southwestern University of Finance and Economics, China

A R T I C L E I N F O

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A B S T R A C T

This study empirically examines the effect of a non-traditional information source, namely a firm's blog visibility on the capital market valuation of firms. After controlling for earnings, book value of equity and other value relevant variables, such as traditional media exposure, R&D spending, and advertising expense, we find a positive association between a firm's blog visibility and its capital market valuation. In addition, we find blog visibility Grange causes trading, not vice versa. Our findings indicate that non-traditional information sources such as blogs help disseminate information and influence consumers' investment decisions by capturing their attention.

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1. Introduction

Word of Mouth (WOM) is widely considered to be a major driver of consumer adoption and diffusion of new products and services (e.g., Bass, 1969; Brown and Reingen, 1987; Biyalogorsky et al., 2001; Chatterjee, 2001) as well as consumers' short-term and long-term product judgments (Bone, 1995). Prior research in this area, which is primarily focused on examining the impact of online product reviews (a form of WOM) on the sales of products, has found online reviews to be a major information source, especially regarding product quality, for consumers (Gupta and Harris, 2010; Weinberg and Davis, 2005). More recent literature in marketing have studied consumer behavior visa vis electronic commerce (e.g., Hernández et al., 2010), use of brand netnography in evaluating visitors experience to places (e.g., Hsu et al., 2009), and the impact of negative WOM on firm-idiosyncratic stock returns (e.g., Luo, 2007). However, there has been little done as far as studying the effect WOM, regardless of whether it includes any genuine content or whether it delivers positive or negative consumer sentiments, on the valuation of firms. Prior research (e.g., Barber and Odean, 2008) has shown that since attention is a scarce resource, stocks that grab investors' attention (e.g., by being mentioned in the news), are more likely to be considered for trading by investors and to enjoy higher returns. Given the intrinsic difference between non-traditional information channels such as blogs and traditional information channels such as news, this study seeks to examine the effect that blogs have in influencing consumers' investment decisions. This study posits that, similar to news, blogs (a form of WOM) have a positive influence on the value of a firm and investors' purchase behaviors.

As a form of WOM, blogs represent the fastest-growing medium of personal publishing and a new method of individual expression and opinion on the Internet. According to blogpulse.com, there are around 77 million blogs currently in the World Wide Web, with approximately 90,000 new blogs created and 700,000 blog posts on a daily basis. The usefulness and importance of blogs are reflected in their adoption by many big companies as a tool to disseminate information, build relationships, co-create product design or customer service (Payne et al., 2009), and solicit feedback from stakeholders and interested parties (i.e., potential customers and investors). For example, GM has adopted FastLane Blog (http://fastlane.gmBlogs.com/) to spread news, provide information, and create an online community for customers to discuss information and views. Similarly, Microsoft uses blogs to communicate directly with customers to understand their response to its products and services (Wright, 2006).

Given the increasing importance of blogs in changing the marketing and daily operations of a firm, it is timely to examine whether the blog visibility of a firm, as an information channel and a marketing tool, leads to improved market valuation. Prior studies have investigated the impacts of email spam and message board activity on short-term capital markets (Wysocki, 1999; Das and Sisk, 2003). These studies show that email spam and message board posts are used to manipulate markets, resulting in temporary market reactions followed by price reversal. However, blogs are fundamentally different from message boards or

* Corresponding author.
E-mail addresses: hun@uwec.edu (N. Hu), liul@uwec.edu (L. Liu), tripathy@uw.edu (A. Tripathy), yao@loyno.edu (L.J. Yao).

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news. In fact, prior studies have found that blogs are more reliable and trustworthy compared to both traditional television advertising and email marketing (Craigie, 2006; Ho and Dempsey, 2010), and that information released through blogs has better quality and a broader audience than traditional media. Although ex-ante blogs are free from any formal quality control process (i.e., peer review or refereeing), comments from blog readers and ranking by blog search engines such as Technorati act as quality indicators of blogs. Blogs often disclose proprietary, in-depth, and more timely information than that covered by traditional media.

In this study, we collect data on the blog visibility of firms and evaluate the relation between their blog visibility and their market valuation. We posit that securities enjoying higher visibility in the blog space will also have higher market valuations. Our study makes an important contribution to the existing literature on the importance of WOM in the context of consumer adoption and diffusion of new products and services. This study brings to light the importance of blogs in the valuation of firms. While prior literature has shown that individual investors are net buyers of stocks that are discussed in the traditional information channels, such as newspapers (Barber and Odean, 2008), this study extends these findings to a non-traditional information channel-blogs. The positive association between blog visibility of firms and their market valuation indicates that firms cannot ignore conversations about their products or services in the blogspace. In fact, firms need to consistently monitor blogs for feedback on how the market views their products and services. Firms could use blogs to communicate more efficiently with their shareholders and other stakeholders, including customers. Such communication and resulting actions by the firms, especially firms with more small investors, could translate into positive market value for the firms. This paper brings to the forefront the effect and importance of non-verifiable information in the market valuation of firms, which has important implications for the SEC and other regulatory organizations alike who are interested in regulating factors which act as important sources of information for investors in the capital market.

In the next section we develop our hypothesis which examines the relation between blog visibility and the value of a firm. In Section 3 we discuss the formulation of the blog visibility measure and in Section 4, our empirical model. Section 5 discusses the empirical results and Section 6 our concluding remarks.

2. Hypotheses development

The impact of visibility on security valuation is founded on two psychological regularities, namely overconfidence and attribution bias (Daniel et al., 1998). Overconfidence is well-documented in the psychology of judgment literature (DeBondt and Thaler, 1995) and is relevant for financial markets because the valuation of securities requires "judgment about open-ended issues and feedback is noisy and deferred" (Daniel et al., 1998). Overconfidence means investors overestimate their abilities in evaluating securities. And to make matters worse, investors have attribution bias. Their overconfidence does not flag even when their evaluation turns out to be wrong. In fact, their overconfidence grows when security prices confirm their estimation. In other words, investors credit themselves for past successes and blame others for past failures (Fischhoff, 1982; Taylor and Brown, 1988; Daniel et al., 1998).

Traditionally stock market participants evaluate a company by reading information released through conventional channels such as newspapers, periodicals (e.g., Business Wire and Newswire), 10K or 10Q reports, and analysts' forecasts. Accordingly, the above findings in the prior literature were based on the visibility of a firm within traditional sources. Investors consider these information channels to be trustworthy and reliable because they believe that the information released through them has gone through some form of quality control such as internal/external audit prior to being released to the public. However, the increasing popularity and trustworthiness of blogs have made them a valid information channel for stock market participants to consider when they make investment decisions.

In the age of information explosion, in general, any publicity is good publicity because even the most critical publicity will stimulate people to talk about the company (Chatterjee, 2001). One good example is book reviews, where researchers have documented that any publicity is good publicity because even negative reviews lead to increased sales. The main driver for such an impact on sales is the number of reviews rather than their content (Sorensen and Rasmussen, 2004). Recent studies have also shown that luxury brands create superior value proposition by a verity of interactions between the luxury brand owners, their customers and members of their respective networks (Tynan et al., 2010).

Today blogging has gained immense popularity and is experiencing rapid growth as a communication channel through the World Wide Web. Blogging represents the fastest-growing medium of personal publishing and one of the most recent forms of individual expression and opinion on the internet. The goal of a blogger is to increase the value of his or her blogs. Blog value can be measured by its authenticity, transparency, credibility, individualism, originality, relevance, and integrity (e.g., *blogcorevalues.blogspot.com/2005/04/evaluating-blog-credibility.html*). Bloggers can build the credibility of their blogs by disclosing personal information, discussing more relevant information, and deciding which blogs or hypertext their blogs should link to. Fundamentally, a blog is a form of a digital social network and often a source of social network (although not discussed extensively in the academic literature: e.g., Dann, 2010), comprising a social structure made of nodes and links. Nodes are the individuals within the network and links are the relationships (interlink, reciprocating citation, and online discussion) between the individuals (Sack, 2001). Owners/authors of blogs put substantial effort into evaluating/cleaning/verifying the information they post on their blogs, which in turn increases the quality of the blogs. Thus, blogs can gain their credibility through their subscribers and their peers (link and dis-link).

Wikipedia is an excellent example of how consumers access and use information that has not been verified in a traditional sense. Unlike traditional resources such as *Encyclopedia Britannica* and *Columbia Encyclopedia*, Wikipedia is an online encyclopedia that is written by volunteers, and anyone with a web browser and an internet connection can update Wikipedia at any time. By 2009, Wikipedia has more than three million articles, and adds more than 1300 articles on a daily basis (http://en.wikipedia.org/wiki/Wikipedia). The "non-verifiable" information and the non-traditional publishing model do not hinder it being used by millions of users worldwide. The popularity of Wikipedia reveals that sufficient number of people find free and "non-verifiable" information to be an acceptable substitute for the verified and edited information in traditional encyclopedias. To some extent, information on Wikipedia can achieve even higher quality compared to traditional media because people can modify the content on Wikipedia if they do not think the content is accurate.

Even in cases where blogs do not communicate any valuable information, but simply provide a reaction to existing corporate news, they might cause asset pricing to deviate from fundamental value by grabbing investors' attention and influencing their purchasing behavior. When choosing among thousands of common stocks, investors face a formidable search problem (Barber and Odean, 2008) because they have limited cognitive processing power and cannot consider all possible scenarios (bounded rationality). Investors address such an issue by limiting their choice sets (Barber and Odean, 2008) to those stocks that have recently caught their attention (Odean, 1999). Most individual investors are unlikely to short-sell